

CLAIMS

1. An electronic component mounting method in which joints between a circuit substrate (1) and electronic components (5, 6) are reinforced using a resin (8), the method comprising: supplying an unhardened reinforcing resin (3, 15) on the circuit substrate (1); supplying a solder paste (4) on bond areas (2) of the circuit substrate (1) on which electrodes (5a, 6a) of the electronic components (5, 6) are to be bonded; placing the electronic components (5, 6) on the circuit substrate (1); and heating and then cooling the circuit substrate (1) with the reinforcing resin (3, 15), the solder paste (4), and the electronic components (5, 6) carried thereon.

2. The electronic component mounting method according to claim 1, comprising: supplying a sheet-form resin (3) on the circuit substrate (1); supplying the solder paste (4) on the sheet-form resin (3); placing the electronic components (5, 6); heating to reflow the solder paste (4) and then cooling; and solder-bonding (7) the electronic components (5, 6) on the circuit substrate (1) and hardening the sheet-form resin (3), the steps being performed in this order.

3. The electronic component mounting method according to claim 2, wherein the sheet-form resin (3) includes equally spaced apertures (10).

4. The electronic component mounting method according to claim 2, wherein the sheet-form resin (3) includes recesses (11) at positions that match the electrode bond areas (2) on the circuit substrate (1).

5 5. The electronic component mounting method according to claim 2, wherein the sheet-form resin (3) includes holes (12) at positions that match the electrode bond areas (2) on the circuit substrate (1).

6. The electronic component mounting method according to claim 1, comprising: printing the solder paste (4) on the specified bond areas (2) of the circuit substrate (1) where the electrodes (5a, 6a) of the electronic components (1) are to be bonded; restricting fluidity of the solder paste (4) so that the solder paste (4) retains its shape as printed;
15 applying the thermosettable reinforcing resin (15) on the circuit substrate (1) including the solder paste (4); placing the electronic components (5, 6) on the circuit substrate (1); and solder-bonding (7) the electronic components (5, 6) on the circuit substrate (1) and hardening the reinforcing resin (15),
20 the steps being performed in this order.

7. The electronic component mounting method according to claim 6, while restricting fluidity of the solder paste (4), the fluidity is controlled such that the solder paste (4) retains its shape as printed during the application of the
25 reinforcing resin (15) but deforms when a load is applied when

the electronic components (5, 6) are mounted.

8. The electronic component mounting method according to claim 7, while restricting the fluidity of the solder paste (4), the solder paste (4) is dried so as to volatilize the solvent or the like in the solder paste (4).

9. The electronic component mounting method according to claim 8, wherein the solder paste (4) covering a substantially entire area on the circuit substrate (1) or covering a specified area is selectively dried.

10. The electronic component mounting method according to claim 8, wherein drying is carried out using any of hot air, a heater, microwave, and light or using vacuum drying method.

11. The electronic component mounting method according to claim 6, wherein the reinforcing resin (15) is applied on a substantially entire area of the circuit substrate (1) or on a specified area selectively.

12. The electronic component mounting method according to claim 6, wherein the reinforcing resin (15) is a resin material having a flux effect.

13. The electronic component mounting method according to claim 6, wherein the reinforcing resin (15) is used that has an effect of bonding the electronic components (5, 6) to the circuit substrate (1).

14. The electronic component mounting method according to claim 6, wherein the mounted electronic components (5, 6) are

retained by deformation of the solder paste (4) that deforms by a mounting load and by adhesive power of the reinforcing resin (15).

15. A circuit substrate comprising a sheet-form resin (3) arranged on a surface on which electronic components (5, 6) are to be bonded, the resin being softened by heat applied during heating for reflow of a solder paste (4) to allow the molten solder above to flow down onto the circuit substrate (1).

16. The circuit substrate according to claim 15, wherein the sheet-form resin (3) includes equally spaced apertures (10).

17. The circuit substrate according to claim 15, wherein the sheet-form resin (3) includes recesses (11) at positions that match the electrode bond areas (2).

18. The circuit substrate according to claim 15, wherein the sheet-form resin (3) includes holes (12) at positions that match the electrode bond areas (2).

19. A circuit substrate unit, comprising: electronic components (5, 6); a circuit substrate (1) having electrode lands (2) on which electrodes (5a, 6a) of the electronic components (5, 6) are to be bonded; solder joints (7) between the electrodes (5a, 6a) of the electronic components (5, 6) and the electrode lands (2) of the circuit substrate (1), and a reinforcing resin (8) arranged on the circuit substrate (1).

such as to reinforce the solder joints (7), wherein the reinforcing resin (8) is composed of a single resin material with a substantially uniform thickness arranged and hardened continuously over the entire area of the circuit substrate (1) or at least over a specified area in which a plurality of the electronic components (5, 6) have been placed.